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10/522,909	10/05/2005	Marc Preaudat	LOM-0047	7128
23599 7590 11/28/2007 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			EXAMINER SHEN, BIN	
			ART UNIT 1657	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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MAILED
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GROUP 1600

Application Number: 10/522,909
Filing Date: October 05, 2005
Appellant(s): PREAUDAT ET AL.

Richard J. Traverso
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/24/2007
appealing from the Office action mailed 2/21/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest
is contained in the brief.

(2) Related Appeals and Interferences

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Examiner is not aware of any related proceedings.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

The appeal involves claims 1-18 are pending, of which claims 1, 2, 5-12 stand rejected. Claims 3, 4, 13-18 are withdrawn. Claims 1, 2, 5-12 are subject to the present appeal.

(4) Status of Amendments After Final

There are no pending amendments.

(5) Summary of Claimed Subject Matter

The summary of invention contained in the brief is correct.

(6) Grounds of Rejection to be reviewed on Appeal

The Appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

1. Bazin et al. Spectrochimica Acta Part A 2001;57:2197-2211.

2. Nicolson et al. USPN4859581.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2, 5-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bazin et al.

(Spectrochimica Acta Part A 2001;57:2197-2211) in view of Nicolson et al. (USPN4859581).

Bazin et al. teach FRET-based enzyme assays using a class of fluorescent complexes, the rare earth cryptate, as a

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fluorescent donor with allophycocyanin as acceptor for probing molecular interactions in biology (see abstract, page 2200, section 2.1., and page 2206, section 3.2. 1st paragraph).

Bazin does not teach determining endoglycosidase enzyme activity.

Nicolson et al. teach a method for determining endoglycosidase (purified heparanase-see column 21, lines 2-46; and nonpurified heparanase-see column 20, lines 25-44) enzyme activity in a sample by labeling a substrate at one or more sites (see claims 1 & 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Bazin's to determine endoglycosidase enzyme activity according to Nicolson because Bazin teaches that the FRET-based assay is designed to reveal substrate modification in enzyme mediated reactions that cleave (including the reaction mediated by endoglycosidase that releases/cleaves oligosaccharides from glycoprotein/glycolipids/polysaccharide), synthesize or modify substrates (page 2206, left column, section 3.2., 1st paragraph). One would have been motivated to make the modification because Bazin et al. specifically described that their FRET-based method demonstrated ease in labeling different type of molecules (thus including peptides, oligonucleotide, and sugar substrates if they are involved in the particular enzyme activity under investigation), peptides and oligonucleotides (page 2209, left column, 2nd full paragraph), and would reasonably have expected success in view of Bazin's teaching of FRET based enzyme assays and Nicolson's teaching of endoglycosidase assay with labeled substrates.

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From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

(10) Response to Argument:

Claims 1, 2, 5-12 are obvious over Bazin in view of Nicolson.

Appellants argue that Bazin does not teach or suggest the substrate molecules described in the instant application, nor an assay technique which is catered to such substrate molecules.

Examiner respectfully asserts that the instant application claims a method for determining endoglycosidase enzyme activity, and that the prior art references teaches or suggests all steps/elements of the claimed invention. Bazin teaches a FRET based assay technique (see title and abstract) labeling different type of molecules/substrates (page 2209, left column, 2nd full paragraph) for the measurement of different enzyme activities (enzyme mediated reactions that cleave, read as including the reaction mediated by endoglycosidase that releases/cleaves oligosaccharides from glycoprotein/glycolipids/polysaccharide, synthesize or modify substrates. See page 2206, left column, section 3.2., 1st paragraph).

Appellants argue that there is no mention of molecules that are labeled with two compounds in Nicolson and Nicolson is silent with respect to donor-acceptor pairs.

Examiner respectfully asserts that Nicolson is cited for its teaching of endoglycosidase assay (column 1, lines 10-12)

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with substrate labeled at one or more sites (claims 1 & 7), and Bazin is cited for the teaching of FRET based assay for enzyme mediated reactions that cleave or modify substrate (page 2206, section 3.2., 1st paragraph), thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to employing Bazin's FRET based assay for the measurement of endoglycosidase activity.

Furthermore, FRET based assay requires labeling of donor-acceptor pairs at two/both sides of a cleavage site, and measures an energy transfer between the donor-acceptor pairs in close proximity, thus Bazin teaches all the steps in a FRET assay and suggests its application in one particular enzyme reaction namely endoglycosidase (taught by Nicolson) activity.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Bin Shen



Date: 11/1/2007

Conferees

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